

## Adapting content subject tasks for bilingual teaching

Ana Halbach

Universidad de Alcalá

### Abstract

Teaching content through a foreign language presents students with the double challenge of having to understand new concepts and of doing so through a foreign language. To be successful in meeting this challenge teachers have to adapt their teaching style and the tasks they work on with their students. Often, however, they do not know how to do so, since, while research offers some guidelines for task design, this tends to be rather removed from the teachers' real-world need so as to be of little use to them, so that teachers feel they have to resort to students' L1 when working on difficult concepts. In this article I try to bring together the proposals made by researches in different areas that can contribute to helping teachers adapt the tasks they use in class, and thus make it possible for students to meet the double challenge of bilingual teaching with good possibilities of success.

**Key words:** bilingual education, BICS/CALP, thinking skills, scaffolding

### Resumen

En el aprendizaje de materias de contenido a través de una lengua extranjera el alumno se enfrenta simultáneamente con los retos de entender conceptos desconocidos y hacerlo a través de una lengua extranjera. Para ayudarle a enfrentarse a estos retos con éxito, los profesores deben adaptar tanto su estilo de aprendizaje como las tareas que proponen a los estudiantes. Sin embargo, muchas veces los profesores no saben cómo llevar a cabo esta adaptación ya que, si bien existen modelos provenientes del ámbito de la investigación que hablan de los parámetros que se deben manipular, estos modelos suelen ser demasiado abstractos como para ser de utilidad para los docentes. Esto hace que, muchas veces, cuando la materia se hace más complicada, los enseñantes hagan uso de la L1 de los alumnos para salir del paso. En el presente artículo se pretende unir propuestas hechas por investigadores en diferentes áreas de conocimiento para ayudar a los docentes a adaptar su forma de enseñar y así contribuir a que sus alumnos puedan tener éxito en la tarea de aprender contenidos nuevos a través de una lengua extranjera.

**Palabras clave:** enseñanza bilingüe, lenguaje académico, habilidades del pensamiento, andamiaje

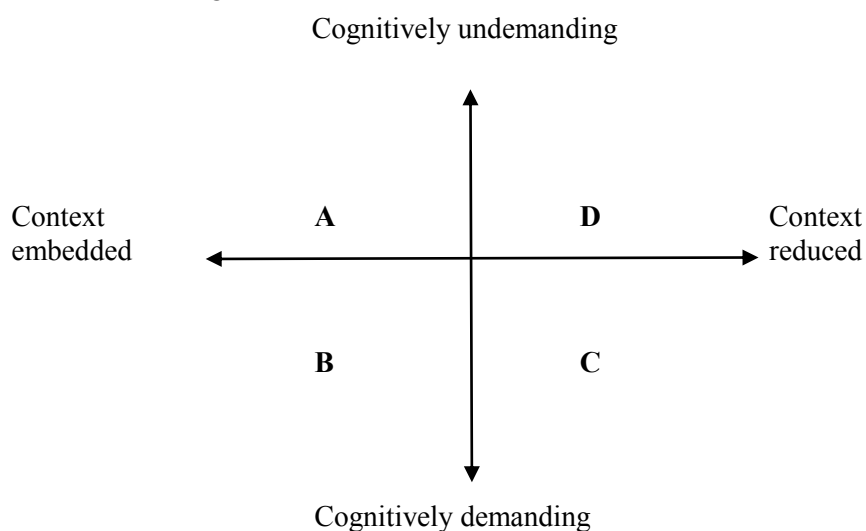
### 1. Introduction

A student teacher, who had just finished her teaching practice in a bilingual school, approached me with the following question: "The teacher I observed had an incredible way of teaching, but I noticed that he only dealt with basic concepts in class. Anything beyond these basics was dealt with through additional materials he gave students to read in their L1. Do you think this is a good way of solving the difficulty of teaching through a foreign language?"

From what I have been able to observe during these almost nine years now in which bilingual education has become a large-scale project in the Madrid area, this technique of resorting to students' L1 for the more difficult concepts is not unique to our teacher here. As students move up into higher grades, and the contents that have to be taught become increasingly more complex, teachers find it more and more difficult to deal with the challenge inherent in bilingual teaching, namely the combination of new concepts to be learnt with a foreign language medium to do so. Not knowing how to face this challenge, many teachers finally resort to students' L1 for these more complex explanations.

Yet, when turning to the literature, we find that some ideas are proposed to deal with this challenge, most notably the framework proposed by Cummins (2000) to gauge the complexity of language tasks. The model can, however, be applied to tasks in general too, and would help assess the difficulty inherent in understanding an explanation of the water cycle or doing an experiment in a foreign language. According to Cummins, tasks can be placed along the two intersecting continua of context embedded vs. context reduced and cognitively demanding vs. cognitively undemanding. The resulting quadrants reflect, to some extent, the difficulty of the task, with tasks placed in quadrant A being the easiest, while those placed in quadrant C will probably be much more challenging for students.

However, useful as it is, this framework provides only limited assistance to classroom teachers who try to find ways to work on complex contents and thus use certain types of task in their classrooms. While Cummins provides some information about the type of language that can be classified as context–embedded / context–reduced, he does not offer any hints as to what constitutes a cognitively demanding or a cognitively undemanding task beyond saying that this distinction relates "to the amount of information that must be processed simultaneously or in close succession by the student in order to carry out the activity" (Cummins 2000: 66), or vaguely relating the notion of *cognitive challenge* to Bloom's (1956 taxonomy). Generally speaking, the pedagogical implications Cummins does outline are related to the linguistic aspect of the challenge, rather than to the cognitive side of it. Furthermore, the framework provides only little guidance on what to do once a given task has been placed in the corresponding quadrant in order to ease its difficulty and be able to deal with the task. As it is, it would seem that the teacher's move to the L1 in the anecdote at the beginning of this paper, is really the only way forward when dealing with complex contents or tasks, and trying to avoid overburdening the student. Yet, if we look a bit further, we find that there are methodological proposals that can help us flesh out the model proposed by Cummins to make it a useful tool for content subject teachers involved in bilingual education.



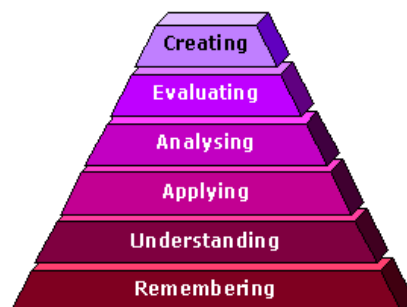
(adapted from Cummins 2000: 68)

## 2. The dimensions of the task

### 2.1 The cognitive aspect

To deal with the first difficulty mentioned, that related to knowing what constitutes a cognitively challenging task, Cummins himself mentions using Bloom's (1956) taxonomy. This has more recently been

modified by Anderson & Krathwohl (2001) and distinguishes between higher-order and lower-order thinking skills, creating a ranking from the least (remembering) to the most demanding (creating) types of task according to the cognitive skills they involve:



(taken from <http://www.learningandteaching.info/learning/bloomtax.htm>)

Thus, looking at this taxonomy, we know that tasks that involve recalling data will be placed at the “cognitively undemanding” end of the continuum, while tasks requiring the evaluation and interpretation of data, or the creation of new insights, correspond to the cognitively demanding end (for an adaptation of this framework to EFL tasks, see Waters 2006).

## 2.2 The linguistic aspect

Cummins (1984) is more explicit about what he means with the *linguistic* dimension of tasks, when, through his distinction between BICS (Basic Interpersonal Communication Strategies) and CALPS (Cognitive Academic Language Proficiency), he calls our attention to the fact that different uses of language pose different types of challenges to the language user. Basically, BICS would be located at the more context-embedded end of the continuum, where language is used for social interaction about the here and now, to speak about things present in the context in which the exchange takes place. CALP, on the contrary, is the language we use for abstraction, to describe less tangible things and processes, to relate things to each other, etc. Therefore, in order to participate in exchanges in which BICS dominates, the student can rely on non-linguistic cues to overcome his/her language shortcomings. When dealing with the de-contextualised language typical of academic exchanges, however, there are fewer extra-linguistic cues to fall back on, and the student has to rely mostly on his (limited) language.

As can be seen, these types of language are very much related to the cognitive demand of the tasks (for a similar point, see Cummins 2007: 121), so that cognitively challenging tasks more likely than not use context-reduced language, while less cognitively challenging tasks will probably also require less abstract language. Also, if, as was mentioned above, cognitive challenge is related to the amount of information that needs to be processed, relying mostly on language also implies a greater challenge than complementing the information transmitted through the language with that coming from the context. Thus, although theoretically possible, it is not very likely that, if we look at the diagram for the classification of tasks, we can find tasks situated in either quadrant B (context-embedded – cognitively demanding) or quadrant D (context-reduced – cognitively undemanding). Yet it is precisely in these two quadrants that the balance between challenge and

achievability of the tasks seems to be right<sup>1</sup>, so what we need is to find ways in which tasks which in principle would be located in quadrant C could be adapted to make them fit into quadrants B and D.

### 3. Dealing with the challenge

Having reached this point we are now able to look for ways in which the challenge posed by the linguistic and cognitive dimensions can be met, without therefore having to resort to students' L1. Thus, for each of the dimensions there would be a move to bring the task towards the "easier" end of the continuum: for the linguistic dimension it would imply creating a context, so that the language used needn't be too abstract, and for the cognitive side the move is towards helping students deal with the complexities of the task through scaffolding.

#### 3.1 Creating a context

For language that in principle is abstract and de-contextualised to become more context embedded, we first need to create a context for the task. This is to say, that in order for the language to relate to students' *here-and-now* we need to create a *here-and-now* that is adapted to the task. Many suggestions have been put forward in the literature of bilingual education as to how this can be done. Most prominently, researchers and practitioners alike have claimed that in order to situate learning, this experience needs to be based on students' own action, i.e. that bilingual learning needs to be hands-on and action-based. If rather than introducing a complex issue through an explanation, the teacher sets up an experiment that makes the topic under discussion visible for students, s/he will, at the same time, have created a context, a real-life experience, to which students can relate the explanation that follows. Thus a *here-and-now* has been created for students. The same effect can be achieved by using real-world resources as a starting point for a unit of work. Thus, going to see an exhibition on ancient Egypt will create a meaningful context to which students can relate the explanations that may later be given in their lessons, or the language used in the tasks they are going to be asked to perform on the topic (see Bonnet et al. 2003: 189 ff).

Similarly, taking students' experience as a starting point for explanations will mean that a *here-and-now* is recalled –if not created as in the above–, in which students can fit the new concepts that are being presented or worked on. Thus, what could be a stream of de-contextualised speech moves closer to the context-embedded language needed to ease the burden of understanding for the student.

A further means for creating a context in which language can be embedded is by using visual aids to illustrate the explanations. Often setting up experiments (hands-on learning or going to exhibitions (using real-world resources is seen as an impossible desideratum by teachers because of time-restrictions or the complexity of organising out-of-school activities, but the alternative of bringing the action and the real world into the classroom through documentaries, for example, can substitute for these. It is also clear that illustrating explanations –or language generally– with diagrams, pictures, charts, or models eases the burden of understanding by creating the necessary context. This "visualising the language" can also be applied to the

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<sup>1</sup> At this point I deviate from Cummins's thinking who states that "language and content will be acquired most successfully when students are challenged cognitively but provided with the contextual and linguistic supports or scaffolds required for successful task completion" (Cummins 2007: 125). In line with Coyle et al's (2010) thinking, I do believe in bilingual education there is room also for more context-reduced cognitively undemanding tasks in which the focus may be more on developing academic language, for example.

structure of the discourse the students have to understand through graphic organizers (Clegg 1999). Incidentally these organizers are such not only to aid understanding but also to help students order their ideas for production, thus, again, easing the cognitive load of producing a coherent argument, for example, in a foreign language .

Finally, for students to be able to make sense of the learning experience, this context–building also needs to include information about the task itself. There is little that strains our ability to understand more than joining in a conversation half–way, without knowing what is being talked about. Yet we often expect our learners to engage in a learning task without allowing them to know what the aim of the activity is, how it fits in with the previous, and what procedures we are going to use to achieve the aim(s) set. Thus, letting students into the picture is vital for learning tasks to be embedded in a meaningful context, and therefore for language to be context–embedded (for a similar point related to mainstream EFL teaching see Nunan 1988: 5). Looking at this list of measures to be used for creating a meaningful *here–and–now* for the learning tasks in the classroom, one may get a feeling of *dejá vu*, as “Many of the approaches, strategies and techniques used by effective immersion teachers are characteristic of all good teachers [...]. However, immersion teachers must use these more extensively and more exclusively than do non–immersion teachers.” (Met and Lorenz 1997: 249).

### 3.2 Easing the cognitive demand

In a similar vein to context–embedding, in order to ease the cognitive demands for students’ in bilingual classrooms we do not need to invent anything totally new, but can resort to the concept of *scaffolding* coined by the Russian Vygotsky almost a century ago. In a general context, scaffolding has been defined as “a process of ‘setting up’ the situation to make the child’s entry easy and successful and then gradually pulling back and handing the role to the child as he becomes skilled enough to manage it” (Bruner 1983: 60). Although there are a variety of taxonomies of scaffolding strategies around, most authors would agree that the main types of scaffolding include *modeling*, *breaking the task up into manageable sub–tasks*, and *leading students’ attention in the right direction*.

As regards the first type of scaffold, modeling, this can apply to the task as a whole or focus on the more difficult parts of the task. This modeling needs to be explicit, as it is not enough for the teacher –or any other “expert” that may be in charge of the modeling– to perform the task for the students (see, for example, Bransford et al. 2000: 19; 49) This modeling needs to be accompanied by an explanation describing what the person is doing and why, how this part of the process fits in with the whole, etc. If learners have seen what they are supposed to perform themselves, the cognitive demand of figuring out what they are supposed to be doing and how is considerably lower.

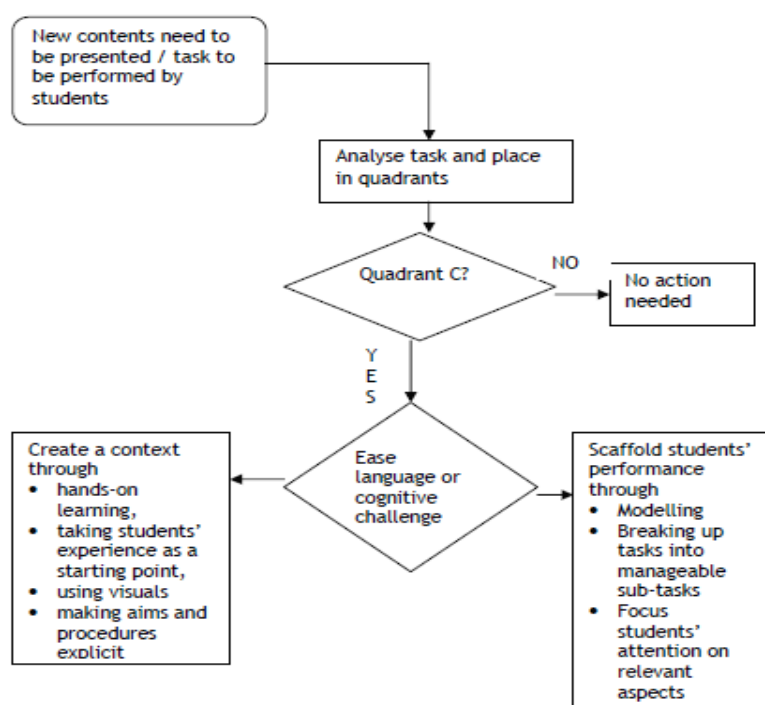
In the second type of scaffolding, a task is broken down into smaller sub–tasks that are more manageable for the student, very much in the way in which we would teach a child to lace up her shoe. Breaking the task into smaller parts helps the student stay focused on what is important at that moment, and gain a sense of achievement in the completion of the sub–tasks. The cognitive demand is, again, lowered. However, in this type of scaffolding there is a danger of losing sight of the task as such. It is therefore important to help students keep the whole picture in mind, so that the task doesn’t lose any of its meaningfulness as part of a larger project.

Finally, this breaking up of the task into smaller parts is a way of focusing students' attention on the important aspects of the learning task, the third of the types of scaffolding mentioned. When facing a cognitively challenging task, finding out what one is asked to do or what the activity focuses on is often the first and greatest challenge, and helping students overcome this first burden on their cognitive abilities will also contribute to making the task at hand less difficult.

These various scaffolding measures are not to be seen as exclusive or a matter of either or, but rather should constitute a set of strategies to be used by the teacher with flexibility and in response to students' actual difficulties. This does not mean that the teacher should not plan the scaffolding he will use with his students (see, for example, Cameron 2001: 22 ff), but rather that "the dynamics between the scaffolding structure and the scaffolding process must be kept in mind. The process is enabled by the scaffolding structure, and a constant evaluation of the process indicates when parts of the scaffolding structure can be dismantled or shifted elsewhere." (Walqui 2007: 205) and "there is an increasing role for the learner as skills and confidence increase; the teacher watches carefully for the learner's readiness to take over increasing parts of the action" (Walqui 2007: 206).

#### 4. Pulling the strands together

Working with the linguistically and cognitively challenging tasks typical for a bilingual classroom needs, as was said earlier, especially skilful practice on the teacher's side. Thus, when facing this kind of tasks that would be placed in quadrant C in Cummins's diagram for the analysis of tasks, the teacher has to take action to either reduce the cognitive demand of tasks, or create a meaningful context in which to embed the task or explanation, or both. The representation of this process of adapting and making more manageable the tasks proposed could look like this:





## 5. Rounding up

Research into bilingual teaching –and language teaching at large– has a wealth of publications and findings to offer. Many models have been created to explain the challenges faced by learners, and to ease teachers’ task of responding to them, but often these solutions are fragmentary, and not easily translatable into classroom practice. In this article I have tried to work with some of the models and taxonomies that are already well-known in the profession, and pull together their strands to form a coherent whole, and one that hopefully will help the actual teacher deal with students’ difficulties in meeting the double challenge of bilingual education without having to resort to students’ L1 for the explanation of the more complex topics. A great number of alternative ways of meeting the language challenge are available to teachers, and using them will not only help to solve a problem typical for bilingual classrooms, but also contribute to improving the teaching generally. Thus “we may well see how the influence of the bilingual programme leads the teaching of literacy [or teaching in general] in the Spanish context to more adventurous, meaningful and communicative methodologies” (Halbach and Fernández 2007: 239).

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Ana Halbach is a full-time lecturer in English and ELT Methodology at the Universidad de Alcalá (Spain). She is currently involved in various research projects in the area of bilingual education, focussing on the implementation of bilingual education at primary and secondary schools in the Madrid area, as well as on the role of the first language in the development of second language skills in the context of bilingual education programmes. She also directs the bilingual education track in the Master's in Teaching English as a Foreign Language at her university, and has published widely in this field.

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